FrameCycler Professional 2011 User Guide

Rev. 2011-C

IRIDAS.

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Credits

This documentation includes images from Angle Mort, Courtesy of Caramel Films, Saigon Eclipse (thanks to Jo Nguyen); The Eagle Hunter's Son, courtesy of Stromberg Productions. Additional images from Erwin Van Der Stappen and Kadenza Media, Tim Baier, Duy-Anh Pham

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Installation

Supported nVidia Graphics Cards

FrameCycler Professional relies extensively on the OpenGL and shader technologies of modern graphics cards.

All current generation nVidia® Quadro cards are certified for use with FrameCycler Professional. Additionally, all high end Geforce cards will usually work well.
We recommend using the latest WHQL drivers from the nVidia web site.

If you're running OS X please don't install any additional driver packages. OS X doesn't require any driver installation as the OS supports every GPU natively. Installing the nVidia CUDA driver might cause issues with vertical syncing, it's highly recommended to not install it.

Installing FrameCycler Professional

Extract License File

Licenses are packaged as zip files and sent to you by email. Before launching the installer, you need to place the license file on your desktop.

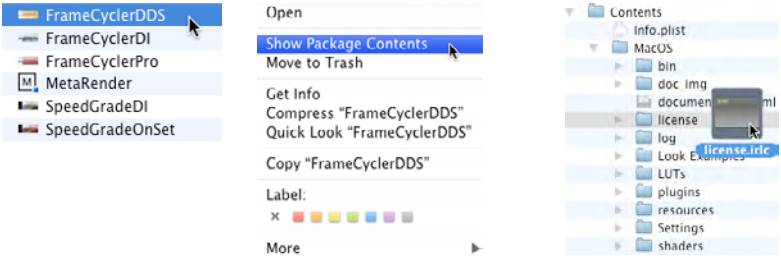
1. Delete any previous license files on your desktop.

2. Drag the zipped license file from the email to your desktop.

3. Double-click the zipped file to extract the license (FrameCyclerPro.irlc). Windows users: drag the license file from the Zip window to your desktop, then close the Zip window.

Mac OS X Installation

Step 1: Download and Install
Download the Disk Image (.dmg) to your desktop and mount it with a double click.
Launch the setup application.
Follow the prompts in the installer.
Note: If you have more than one hard disk on your system, choose the one which contains your Applications folder.



Step 2: Activate Your License

Navigate to your Applications folder and find FrameCycler Professional.
Right-click (or Ctrl+click) on the product icon
Select "Show package contents" from popup menu and new finder window will open.
Double click on the contents folder to open it. Then open the MacOS folder.
Then copy or drag and drop your license file (FrameCyclerPro.irlc) into the license folder found there.
Close finder window

Step 3: Launch FrameCycler Professional

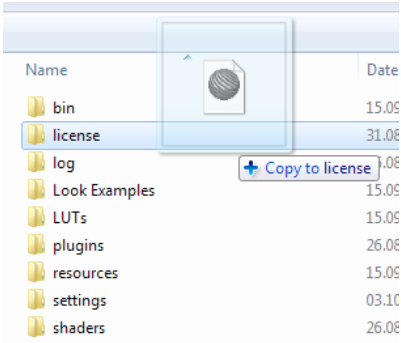
To launch FrameCycler Professional, click the icon in the Applications folder, or create an icon for the dock and launch it from there.

Windows Installation

Step 1: Download and Install
Download the setup executable to your computer.
Double click on the setup executable and follow the instructions on the screen.

Note: please be sure to install FrameCycler Professional outside the Program Files directory. Otherwise UAC settings might prevent you from changing settings and saving .looks and backup files of your current session.

Step 2: Activate Your License
Copy the license file that has been sent to you via email to an empty folder and extract it there.
Open an Explorer window, then navigate to your Program Files folder and find your FrameCycler Professional installation.
Then copy or drag and drop your license file (FrameCyclerPro.irlc) into the license folder found there.



Step 3: Launch FrameCycler Professional
To launch FrameCycler Professional, click on the start menu, click on All Programs, open the IRIDAS entry and find the submenu with your product.

Linux Installation

Step 1: Download and Install

- Download .tar.gz archive to your hard disk.
- Extract archive to folder (tar xvfz archive.tar.gz).
- Verify the bin subdirectory is executable (chmod 777)

Note: Because of binary compatibility problems between different LINUX distributions, please make sure you download the LINUX installer package that was created for your LINUX distribution. If your LINUX distribution is not supported, please contact us for help in selecting the right package.

Step 2: Activate Your License

Copy the license file that has been sent to you via email to an empty folder and extract it there. Then copy your license file (FrameCyclerPro.irlc) into the license subdirectory in your FrameCycler installation.

Step 3: Launch FrameCycler

To launch your product, start the shell script from the /bin subdirectory (for example ./bin/framecycler)

Quick Start Guide

Step 1: Set Project Defaults

Open FrameCycler Professional, then click on the Settings tab to the right of the Desktop or push <S> on your keyboard.

1. Select Editing. Choose defaults for your project, be sure to check the base frame rate before you start loading any footage.

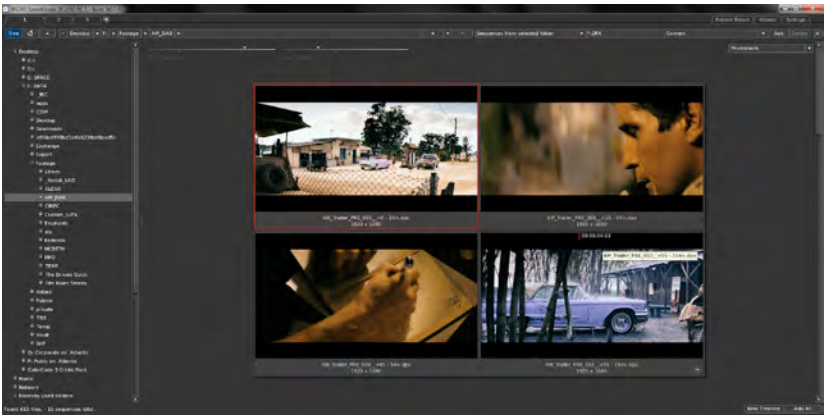
Step 2: Loading Footage

FrameCycler Professional opens automatically to the Browser Desktop where you can find and open the footage you want to work on. At any other time, you can click on the Desktop button to return to the Browser Desktop.

1. Navigate to the folder containing your footage. You can do this with the path control or by enabling the file tree browser (click "Tree" to activate).

2. Drag the Thumbnail Size and Aspect Ratio sliders to adjust the size and number of images which are viewable in the browser.

3. Click the plus icon (or just double-click on thumbnail) to add it to the timeline. Repeat this with additional sequences. If you want to load all sequences shown on the desktop at once, just click on "Add All"button.



Tip: Scrubbing Sequences
If you have a sequence of frames or RAW files, you can scrub through it by dragging left or right at the top of the thumbnail.

Step 3: Navigation and Zoom

1. Close the Desktop (<D>). Use the playback command bar in the UI to control playback and to navigate along the timeline. Useful hotkeys are listed in the chapter on hotkeys.

2. Check zoom to fit and zoom to 100%:
- CTRL + HOME enables zoom to fit
- CTRL + SHIFT + HOME enables 100% view (pixel-to-pixel, avoiding any display scaling)

If you want to zoom into the image, simply use the +/- keys on the numpad.

3. Activate one of the burn-in presets such as "HD Rushes" to see metadata info displayed as an overlay on your image output. See the chapter on Customisation to learn about how to create workflow specific presets.

Step 4: Save Your Project

It is recommended to save the current project status frequently in case you need to go back in time and find a previous save you liked better.

FrameCycler Professional stores all info created during a FrameCycler Professional session in one XML file, the FrameCycler Professional *.ircp file.

Setup Scenarios

Typical Setup Scenarios

Overview

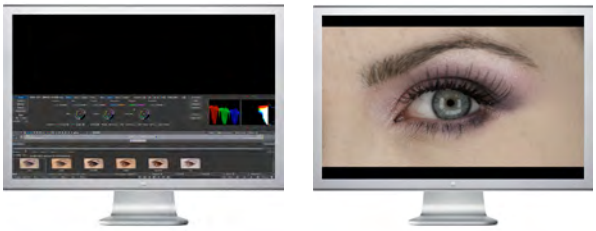
FrameCycler Professional can be used on either a single screen with both image and UI on one display, or as a dual monitor setup. A dual monitor setup uses two monitors connected via 2 DVI outputs.

FAQ: how many outputs on the nVidia GPU can be used in parallel?
Only 2 outputs at a time can be used in parallel. The additional DisplayPort is not active in parallel.

Related Links:

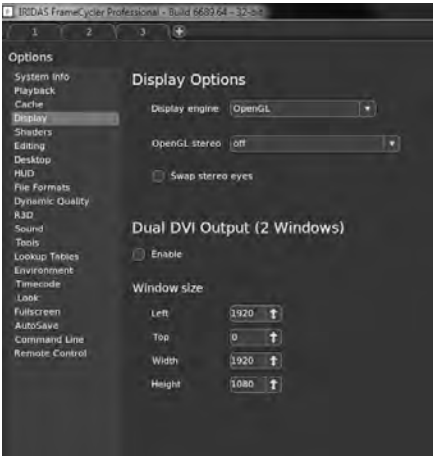
Dual Monitor Setup
http://doc.iridas.com/index.php/Dual_Monitor_Support

Creating a Dual DVI Setup



Connect one DVI output to your UI display, the second DVI / DP output to your calibrated monitor or projector.

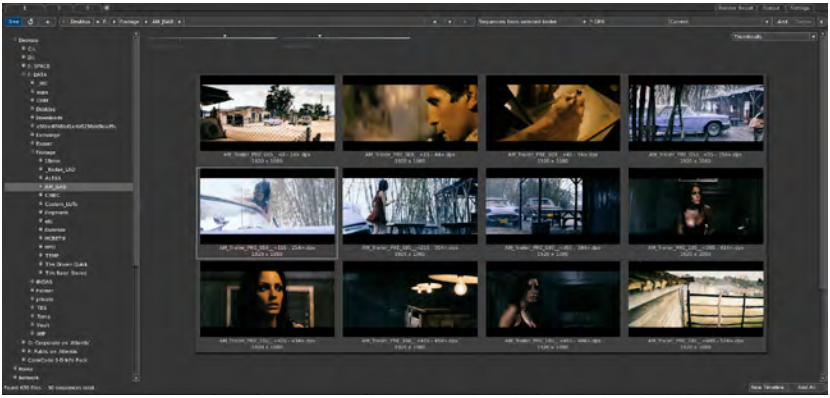
Settings for Dual DVI Output



Open the Settings (push <S> or click on "Settings").
Select "Display".
Check the settings under "Window Size", the defaults values will work for 2 displays using 1920 * 1080 resolution. Click "Enable" to activate Dual DVI Output.

User Interface Overview

The Main User Interface Areas



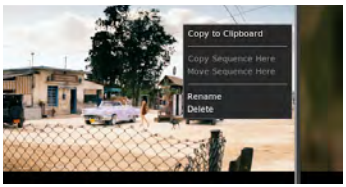
The Desktop

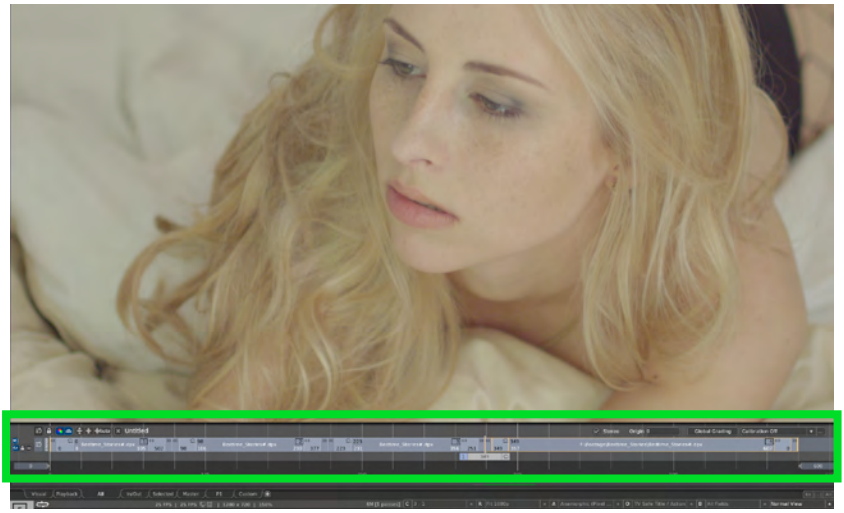
The first thing you'll see after launching FrameCycler Professional is the Desktop, which is where you load frame sequences, RAW sequences or movie files or FrameCycler Professional projects.

The most basic way to get started is to locate the footage directory with the bread-crumb control, then double click on a thumbnail preview in the main part of the desktop to add it to the timeline.

Tip

Right Mouse Click allows for easy access to powerful renaming and other data management features.





The Timeline

The timeline shows the assembly of clips from the Desktop. It allows for applying a calibration LUT, working with different views of the edit and creating multiple playheads along the edit. The pull-downs for aspect ratio, resample, crop, burn-in and overlay allow for customizing your image display.

Tip

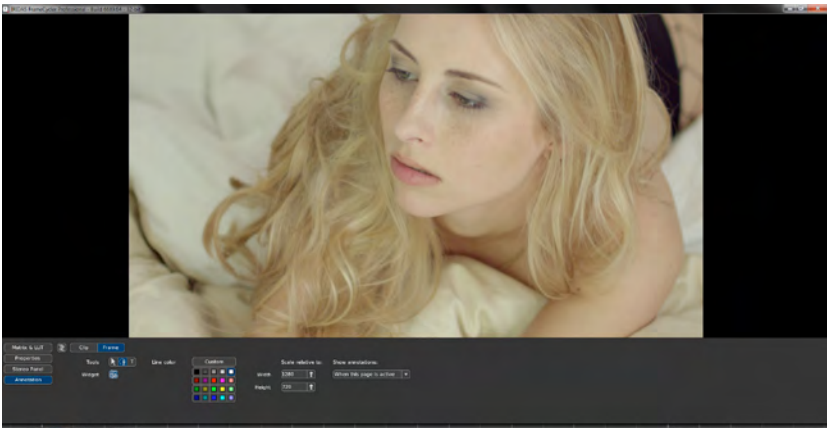
The Visual Timeline shows each edit along the timeline as thumbnail preview.
To activate the visual timeline, click on the "Visual Tab" beneath the timeline.

The Viewport

In a single monitor setup the viewport is hidden under the desktop. Close the desktop to view it. Use <CTRL + HOME> to adjust the size of the image to your screen size. In a dual monitor setup the viewport is placed on the second monitor and will show images while the desktop is open.

Tip

If you're running a single screen setup, <SHIFT + H> allows to toggle between a fullscreen footage view and your current work environmet with Timeline, Browsers and Scopes open.

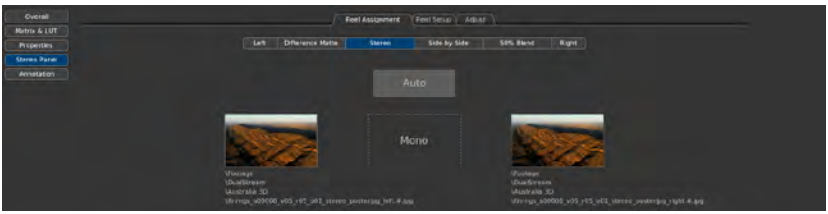


The FrameCycler Professional Panel

Directly above the timeline is the panel for Stereo 3D, annotations, setting clip properties. This is also where the scopes can be docked if you don't want them to float.
You can change the size of the panel by positioning the cursor over the top of the panel, and dragging the highlighted line. Show or hide it with <K> or push the FramceCycler button.

Tip

The Stereo Panel provides easy access to the DualStream NX features in one workspace. Once the FrameCycler Professional Panel is active, switch to the Stereo Panel with <SHIFT + S>.



Preset and other Browser Windows

Additional Browser Windows can be activated as needed. The .Look Browser shows grading presets generated with FrameCycler DDS or SpeedGrade OnSet / SpeedGrade NX. The Reel Browser shows all reels of the current edit and can be used to manipulate offsets.

The Output Section

For rendering a clip or an entire project the render dialog allows for selecting the output format of choice as well as a number of options such as
resample and crop or adding a preview LUT.

Press the render button in the interface or use <CTRL + R> to open and close the dialog.

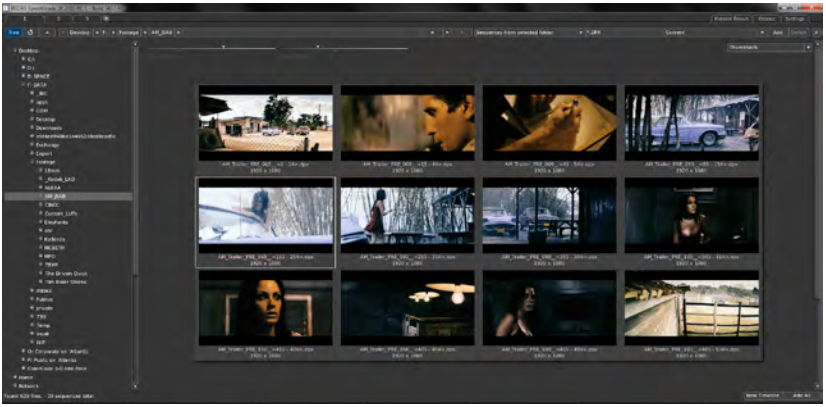
Tip

The new speed control display allows to estimate time of completion when rendering locally.

Loading Footage

Loading Footage

The first thing you see when you open up FrameCycler Professional is the Desktop. You can show or hide it at any time by pressing **< D >**.
The desktop can be used to navigate through folders with image sequences, movie files or RAW file formats. FrameCycler Professional will present thumbnails in the main area of the desktop. Alternatively you can load existing FrameCycler Professional projects (.ircp)



Desktop: Thumbnail View (default)

Desktop: List, Video

Navigating

Use the bread-crumb control to navigate to the correct folder on your drive or network.
If you prefer tree view navigation, turn on the tree view control (first button top left on the desktop).

Toggles the tree view

For easier viewing you can adjust the thumbnail size, drag the slider "Thumbnail Size" to the right to enlargen the thumbnails.

Thumbnail Size. Drag slider to the right to enlargen thumbnails on the desktop. Double click on the arrow to reset to default.

Search Criteria

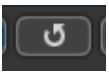
If you want to only display data with a specific file extension or files starting with specific characters enter search criteria, such as file extensions in the top right field (e.g. "*.R3D").

Search Criteria. Default is *.*

Tip: You can create custom presets for search criteria. Enter the cirteria (such as *.DPX), click "Add", choose a name for the preset. You can now use the pull-down menu next to the add button to select presets.

Refresh

Click on the refresh button if files have been updated while the desktop was open.

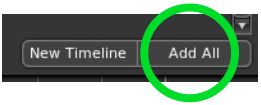


Loading Multiple Sequences

Open the desktop. Double click on a thumbnail or select and drag to the timeline to add the clip to the timeline. Repeat this with any additional thumbnail that you'd like to add to your timeline. Every item you add will get placed after the last clip on the timeline.

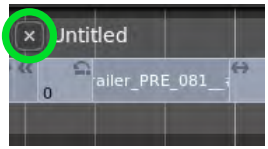
Loading Multiple Sequences at once

Open the desktop. Browse to the folder that includes sequences you want to bring to the timeline. Click "Add all" at the bottom of the desktop to add all files in order of appearance. This usually gets used when loading RAW data for creating dailies to create a virtual lab reel.



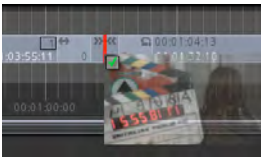
Tip: How to delete an existing timeline?

If you want to delete a timeline simply click on the "x" icon at the right end of the row of buttons above the clips on the timeline. You'll need to confirm that you want to delete the timeline.



Inserting a Sequence inbetween Clips

If you need to place a clip inbetween material that's on the timeline already, drag and drop the thumbnail from the desktop onto the position on the timeline where you'd like to place it. A highlighted red line will appear once you're at the right position. Release the mouse.

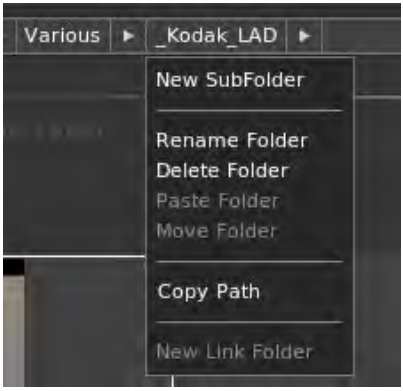


Loading a FrameCycler Professional Project

Open the desktop. Navigate to the folder that contains the .ircp file that you want to load. Double click on the thumbnail.

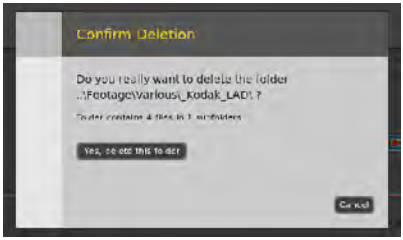
Right Click Features to Manage Content

There are a number of new right mouse click functions in the 2011 Desktop.



Right Click a Folder
If you right click a folder a context menu will appear which gives you several options:

- New SubFolder: Creates a new folder at that position
- Rename Folder: Renames the folder that was clicked on
- Delete Folder: Deletes the folder
- Copy Path: Copies the path into the clipboard



The options Paste Folder, Move Folder and New Link Folder are available when a path was copied to the clipboard:

- Move Folder: Move the folder in the clipboard to a new location
- Copy Folder: Copy the folder in the clipboard to a new location

New Link Folder
Create a virtual folder that links to the folder in the clipboard. This option allows you to build virtual directory trees, similar to shortcuts or symbolic links in the operating system.

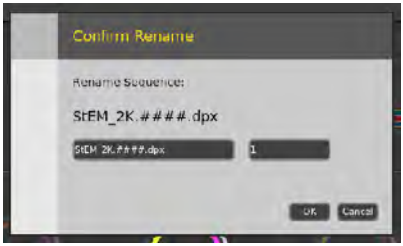
Right click on a file or frame sequence functionality

If you right click on a file or frame sequence you get a new context menu to manipulate the entry:

- Copy to Clipboard: Copy the path of the sequence or file to the clipboard
- Copy Sequence Here: If a sequence path is in the clipboard, allows you to copy the file or sequence to this location

- Move Sequence Here: If a sequence path is in the clipboard, allows you to move the file or sequence to this location

- Rename: Gives you the option to rename the file, if it is a sequence, you can also renumber it.



For renumbering, you can control the padding using the # characters. One # omits padding, multiple ### pads to the number of # characters. The second edit box to the right indicates the start frame number.

Tip: Autocomplete for Typed Directories

The 2011 Desktop supports autocomplete in the path control for typed directories.

If you click into the directory bar at the top of the sequence browser and start typing, you will get a list of matching directories. Simply select one using the cursor up and down keys and hit enter to move to that subfolder. Autocomplete will automatically list the 10 subdirectories of the newly entered folder, making it very easy to browse complex folder structures with minimal effort, using only the keyboard.

Adjust Settings for Precaching

Press <S> to open the settings, select Cache to increase or decrease the total amount of RAM you want to assign to be used by FrameCycler.

You can also change the amount of frames that will be precached as you add material to the timeline, enter values for "Read" to adjust the amount of frames FrameCycler will precache from the current position of the Master Playhead.

Adjusting Playback and Viewport Features

Adjusting Playback Features

Once a sequence or FrameCycler Professional project is on the timeline, it's ready for playback. Make sure to close the Desktop before you hit play (press **<D>** or click on the Desktop button to close it).

You can use the Tangent CP200-TS playback controls, the on-screen playback buttons at the bottom of the control console, or Hotkey shortcuts to control playback (for a full set of hotkey shortcuts please refer to the last chapter).

To Play/Pause use the Space Bar. If you want to use step forward and backward use the right and left arrow keys.

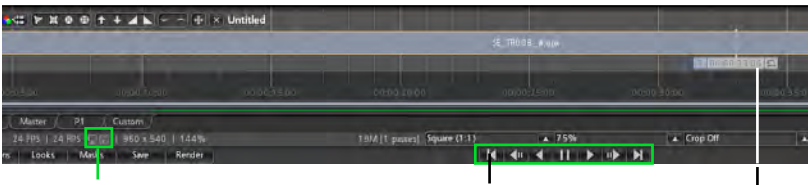
To go to a different position on the timeline drag the playhead to the desired position.

Playback Mode
Press **<F6>** to switch modes: Single Run, Ping Pong, Loop

Show/Hide Desktop

Base frame rate (fps)
To choose a different base fps open the settings and select "playback"

User-specified fps
To change the current playback speed, double click on the number and enter a new value. Press < ENTER > to apply it. Alternatively use page up and page down to change playback speed by 1 fps



Disk icon turns red when disk subsytem / CPU can not deliver real time decoding.

Display icon turns red when GPU cannot provide real-time performance or display output is not in sync

Playback Buttons
From left to right:
- Go to in point
- First position of current clip / edit
- Play backwards
- Pause
- Play forward

Playhead
indicates playback position. Double click on TimeCode and enter new TimeCode to move to a different position

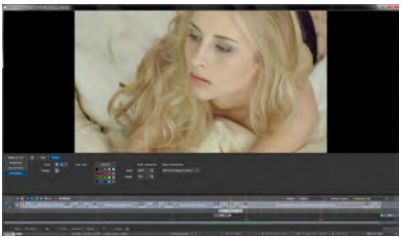
The Viewport

The Viewport is either on the same display as the user interface (single monitor setup) or on a second display (Dual DVI or DVI/SDI). The Viewport shows the image according to the position on the timeline. If multiple playheads are in use, the Viewport will display images according to your screen layout defintions. This can be up to 9 images in parallel. For further info on using multiple playheads please refer to the chapter Multiple Playheads.

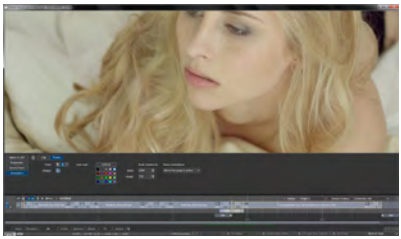
Positioning Images

You can change the magnification and the positioning of the images in the Viewport.
Use Hotkeys for zoom to fit and zoom to 100%:
Zoom to fit: <Ctrl + Home>
Zoom to 100% <Ctrl + Shift + Home>

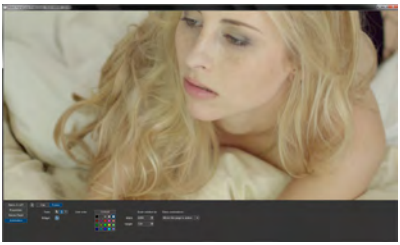
To zoom in and out of the image use <Ctrl + Mouse Wheel> or use <+> and <-> on the number pad.



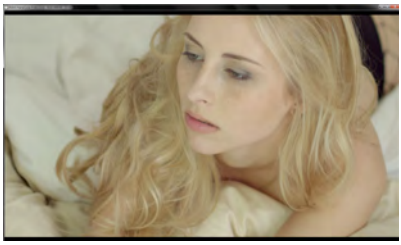
Zoom to fit: <Ctrl + Home>



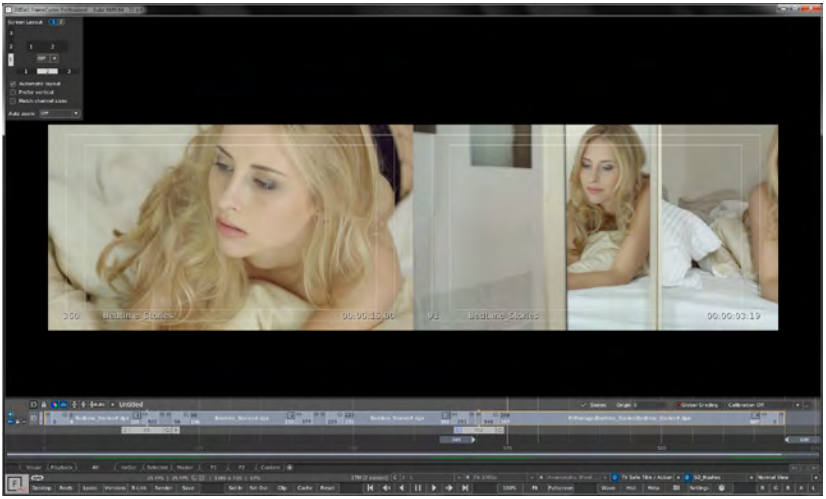
Zoom to 100%: <Ctrl + Shift + Home>



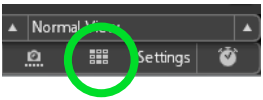
Hide Timeline and Controls: <TAB>



NEW: Hide everything,
zoom to fit and center: <SHIFT + H>



Automatic Screen Layout



To open the Screen Layout window click on the button with the 9 squares right next to "Settings" (button section bottom right). The default settings will show "Automatic Layout" turned on.

Automatic Layout will allow you to:

- Add Playheads and automatically display them
- Remove playheads and automatically reflect the change in the screen layout

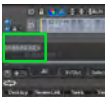
While in automatic layout you can also turn on "Auto Zoom". This will automatically upscale all images along the timeline to the highest resolution placed on the timeline in either horizontal or vertical resolution (select "keep width" or "keep height" from the pull-down).

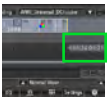
For advanced use of the Screen Layout please refer to the chapter about Screen Layouts.

Working with the FrameCycler Timeline

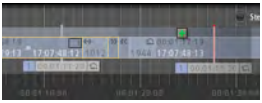
The Timeline

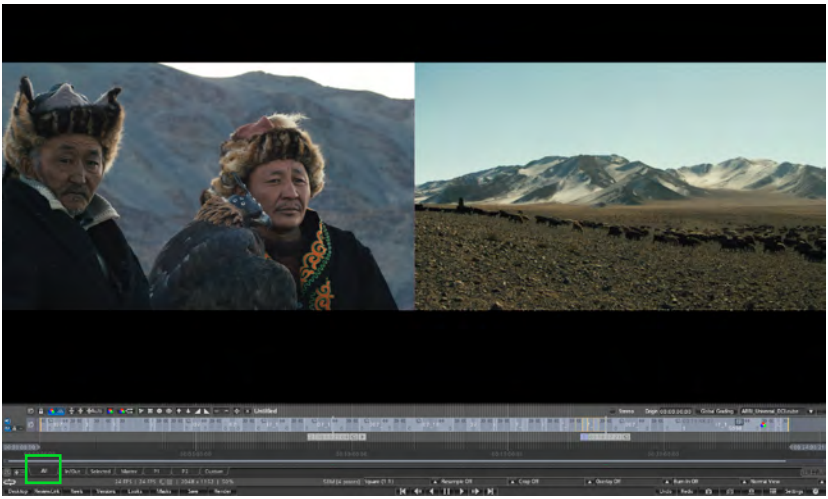
In FrameCycler Professional, all of your work is arranged on the timeline. Determine which part of the timeline you want to play by positioning the in- and out-points.





The playhead shows which frame is being viewed at any given moment. To view more than one at the same time (for example to compare the grading of different parts of the same shot or scene) create additional playheads by control clicking the right side of the playhead and dragging a second playhead to the desired position: this will result in multiple pictures in the Viewport.



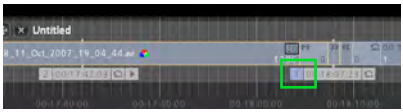


Typical setup: “All” view is selected. This shows all material placed on the timeline as well as all playheads placed on the timeline. The active playhead (in this example playhead 1) is marked blue. 2 Playheads are available, both are on display in the Viewport.

Timeline Elements

Playheads

One playhead is always present with each timeline. The Master playhead is marked blue. This is the one that defines which clip is active for grading and other adjustments.

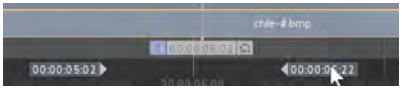


In-Points and Out-Points

The default position is at the start and end of a clip or playlist, however you can move them manually with the mouse or by double-clicking on the frame number and entering a new number

Ctrl + Click on in or out point to restore default position.

Double click on a clip to set in and out points for that clip.



Tracks

FrameCycler Professional uses tracks on the timeline for:

- Footage Clips (blue)
- Audio (solid green)

Footage and Audio Clips show the name of the source files.

Navigating along the Timeline

On a Timeline with multiple clips and multiple tracks you can navigate clip by clip and track by track. Navigating clip to clip changes your master playhead position on the timeline.

The most important Hotkleys are:

< CTRL > + < SHIFT > + Arrow Key Right	Go to next clip
< CTRL > + < SHIFT > + Right Arrow Key Left	Go to previous clip
< CTRL > + < SHIFT > + Arrow Key Up	Switch to track above
< CTRL > + < SHIFT > + Arrow Key Down	Switch to track below

For a full list of Hotkeys please refer to the Hotkey chapter at the end of this document.

Adding Audio Tracks

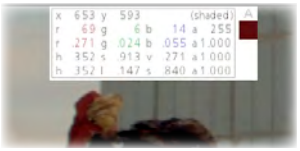
Audio Tracks

To add an audio track open the Desktop, locate the audio file you'd like to place on the timeline (wave or aiff file), drag and drop it onto the timeline above the footage track. Repeat this with additional files you'd like to add. Note that FrameCycler currently supports up to 15 min. of stereo audio clips along one timeline.
Sound tracks will always appear above all other tracks.
To change values for sound output such as the mixing frequency open the Settings and choose "Sound".

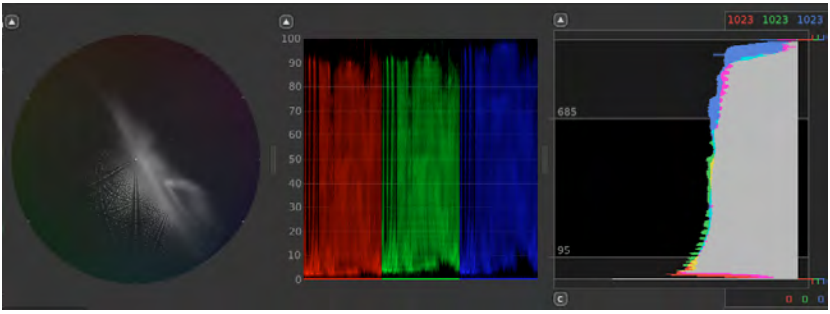
Image Analysis Tools

Image Analysis Tools

Histogram, **Vectorscope** and **Waveform** are part of FrameCycler Professional. Use hotkeys to activate or deactivate. The **color picker** shows pixel color data, **channel views** allow you to check specific color channels. Use it, for example, to check for compression artifacts or noise in R,G or B channel.



Color picker
Click anywhere on image to show pixel color data



Vectorscope
Press < V >
Resize by dragging the handle to left or right

Waveform
Press < W >
Resize by dragging the handle to left or right

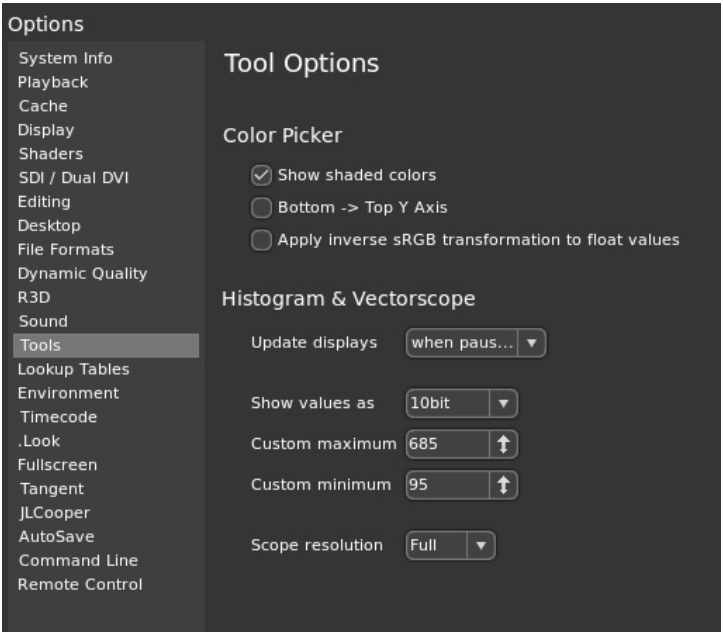
Histogram
Press < H >
Resize by dragging the handle to left or right

Tip: You can adjust the ranges for the scopes, limit warnings and the way the scopes get updated during playback in the Settings. Press < S > and select Tools to make changes.

Tip: You can detach the scopes from the FrameCycler Professional Panel by clicking on the undock button. This can be done for each scope separately. Click on the docking icon to bring it back to the FrameCycler Professional Panel.

Adjusting FrameCycler Professional's Scope Presets

You can adjust the ranges for the scopes, limit warnings and the way the scopes get updated during playback in the Settings. Press < S > and select Tools to make changes.



Global Grading

The Grading Panel

The Grading Panel offers tools for primary grading. It is applied to all clips on a timeline.

Grading Panel Basics

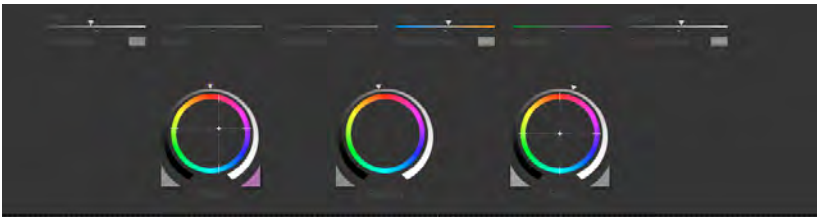
Axis point
Adjust values here

Master dial
Adjust ganged values for this color wheel

Grading icon indicates that grading has been done on this track

Alternating Grading Selector Modes

You can switch the main color controls between **color wheel**, **slider**, and **numerical value** controls. To switch modes push < SHIFT > + < ENTER >.



Wheels

Sliders

Numerical values

Reset Buttons

The two buttons below color wheels allow for performing a reset to default.
Reset buttons in the main grading interface will only become visible once the selector is no longer on default values.

The same rule applies to all sliders - once you perform an operation, a reset button will become visible.

Matrix & LUT Panel

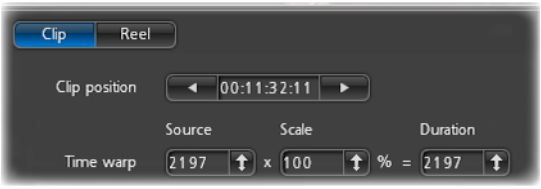
This section is used to apply data that's required to accurately reproduce color when working with RAW image data from the ARRI D21, ARRI Alexa, Phantom HD / 65, Silicon Imaging SI2K. You'll find the .Look files for cameras under settings/looks/

.Looks for ARRI D21: FrameCycler Professional can reproduce camera matrix data and exposure LUT. Choose the .Look according to your original exposure.

The Properties Panel

The Properties Panel shows clip based info such as clip position on the timeline, time warp and display options to mirror the picture or reverse the clip.

Clip position
Click on left or right button to change the clip position on the timeline



Length of the source clip

Scaling factor in %

Duration of the clip after scaling

Timecode for current clip based on source reel

Reverse playback for current clip

Mirror current clip Horizontally

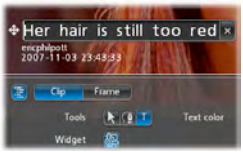
Mirror current clip Vertically

The Annotations Panel

Use **Annotations** to save and exchange notes and drawings. Annotations are saved in the XML session script (.ircp). When the next user opens the script the annotations appear for review.

Adding Notes

Select the text tool and click on the image. Type notes into the text box. Color or size of type can be changed. Click elsewhere to close text box.
Click on the text again to edit or move note to another part of the image.
If you want this to appear on a single frame only instead of the full clip select "Frame" before making an annotation.



Removing Notes

To remove notes click on the delete sign (x) at the right of the text box. To delete drawings, select the line and click on the delete sign (x) next to text tool button

Working with .Look Files

.Look Files

FrameCycler Professional supports the use of .Look files. These files are only a few kilobytes so they can easily be exchanged with others, such as the cinematographer, the director, VFX supervisors etc.
You can apply .Looks created by the cinematographer with SpeedGrade OnSet or FrameCycler DDS or SpeedGrade NX.

Applying a .Look

1. Select a clip
2. Open the **Look browser** by clicking on the Looks button
3. Navigate from the browser tab to the folder containing the .Look(s) you want to use.
4. click on a .Look, and press < ENTER > to apply the .Look

The .Look Browser

The .Look Browser can be used to organize .Look presets for grading. The default location for the first tab in the look browser is ../FrameCycler Professional/Settings/Looks. You can copy .Looks already generated with applications such as SpeedGrade OnSet into this folder, they will show up next time you open the .Look Browser

To open and close the .Look Browser click on Looks button.

Complex Timelines and Advanced Viewing Features

Managing Complex Timelines

To keep an overview of a very long or complex timeline, FrameCycler Professional offers a variety of timeline views.
In addition, you can collapse (and expand) timeline tracks manually or automatically when you want to focus on specific clips.
Press **< Tab >** to hide and show the timeline.

Timeline View Tabs

All View
shows the entire timeline. If you have many clips they will appear compressed together.

In/Out shows the section of the timeline between the in- and outpoints.

Selected displays the currently selected clip. A selected clip is highlighted with yellow outlines. If you're in this mode the playhead will move along one clip and keep the full length of the clip visible. As soon as the playhead hits the next clip the view will change and show the new clip in its entire length.

Master places the playhead in the center of the screen. During playback, the timeline rolls past the playhead which remains fixed in position. With multiple playheads, you can click on the **P1** or **P2** for the same effect.

Custom allows you to determine which part of the timeline you display. This mode works independently from playhead positions. Click the "+" button next to "All" to generate additional custom views. You can change the area of interest with the timeline zoom features.

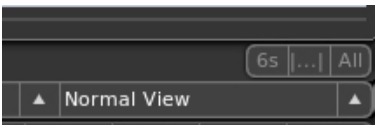
Timeline Zoom

In Master, P- and in Custom view modes you can zoom in and out by holding < CTRL > and scrolling the mouse wheel while your mouse pointer is over the timeline.

To speed up the zoom process hold down < CTRL> + < SHIFT > and scroll the mouse wheel.

In custom mode you can additionaly shift the entire timeline display to the left or the right, just hold down left mouse over any part of the timeline display underneath the clips and move to the left or to the right.

You can also use a standard zoom to 6 seconds on the timeline by clicking on the 6s icon. The icon next to 6s will zoom according to in and out points, ALL zooms to show all elements on the timeline.

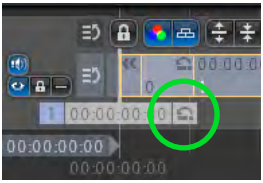


Working with Multiple Playheads

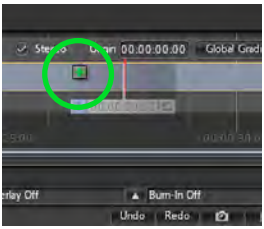
FrameCycler Professional supports up to 9 playheads. You can use multiple playheads to create A/B and splitscreen scenarios, to compare the beginning of a shot with its end, to compare multiple versions of the same shot or to compare different episodes. Please refer to the Screen Layout chapter for details about arranging playheads manually in the Viewport.

Creating additional Playheads

Creating additional playheads is a simple drag and drop operation. Click on the handle area of the master playhead (the area to the right of the "1" marked in blue).



Hold down CTRL and move away from the current position. You'll see a semi-transparent copy of the playhead, above it a green "+" sign. Drop the playhead at any position along the timeline where you want it. At the release position there's now a second playhead. If the screen layout is on "Automatic Layout" a second image will show in the Viewport.



Tip: to see both pictures completely use < CTRL > + < HOME >, to see them pixel accurate use < CTRL > + < SHIFT > + < HOME >.

If you want to create additional playheads you can drag and drop again from the first playhead or from the newly created 2nd playhead.

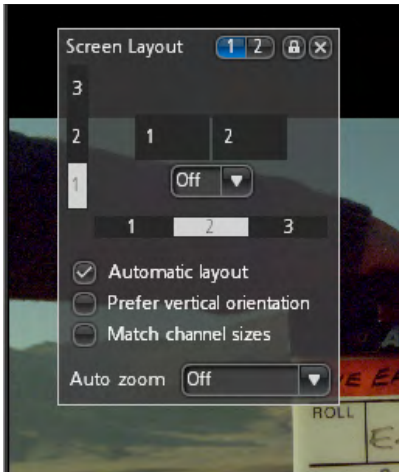
To delete additional playheads simply drag and drop them into the viewport. Click on a playhead's handle icon to start the process. Note that you can't delete the master playhead (marked blue).

The Screen Layout

To open the Screen Layout window click on the button with the 9 squares right next to "Settings" (button section bottom right). The default settings will show "Automatic Layout" turned on.

Automatic Layout will allow you to:

- Add Playheads and automatically display them
- Remove playheads and automatically reflect the change in the screen layout



While in automatic layout you can additionally turn on "Prefer vertical orientation". This will add images for every additional playhead in vertical orientation.

You can also turn on "Auto Zoom". This will automatically upscale all images along the timeline to the highest resolution placed on the timeline in either horizontal or vertical resolution (select "keep width" or "keep height" from the pull-down).

Note: all settings you make in the Screen Layout will not effect your render output settings.

Automatic Screen Layout: the operator has placed 4 playheads along the timeline. All 4 are the same size and can get displayed at once. Use < CTRL > and scroll the mouse wheel to zoom in and out. Hold down the mouse wheel on the pictures within the Viewport to pan around.

Working with A/B and Splitscreen Views

Whenever you select 2 playheads you can choose between 3 view modes:
A or B: Select 1 and 1 in the screen layout. Use the pull-down for playhead numbers to select the playhead you'd like to display.
A/B side by side: Select 1 and 2 in the screen layout. This will display both playheads side by side. You can place them top to bottom by selecting 2 and 1. Alternatively push < F10 > to change the orientation.
Splitscreen: to go from A/B to splitscreen select "split" from the pull-down or press < F9 >
To change the orientation of the split press < F10 >
To move the split position hold down < CTRL > over the viewport and move the mouse.

Splitscreen Layout: the operator has opened 2 timelines. Timeline 1 (with playhead 1) shows a calibrated and corrected image, timeline 2 a copy of timeline 1 without correction and calibration. Playhead 1 is the left half of the split. To show just the corrected picture instead of the splitscreen press < F9 >.

Working with alternating Screen Layouts

The Screen Layout allows for setting up two alternate layouts. You can use this to create a general purpose layout that will work for all standard viewing purposes and a second layout with either an advanced setup or a setup you alter whenever you need viewing options aside from "Automatic Layout".
By default layout 1 is active. To change to layout 2 click on "2". The button will turn blue. Changes you make in layout 2 will not affect layout 1, you can interactively switch between them.

Editing Features

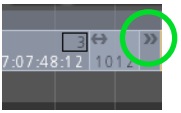
Editing Features

Split clips

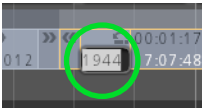
You can split the clip currently selected at the position of the master playhead. Move the playhead to the position where you'd like to split the clip, then press <CTRL + ALT + S> to split it.

Trim clips

If you prefer to trim using your mouse, just work with the double arrow areas at the very beginning and end of each clip. It's easiest to accomplish this when the timeline is zoomed to show the current clip in detail, use either the timeline zoom in master view or simply use the "selected" view.



If you prefer to work with numerical input, just double click on in or out point of the current clip and change the offset with your keyboard. Press enter to commit the change.



Ripple all / remove gaps

If you trim a clip and want to remove the gap it creates between the current and all following clips, just drag the next clip (hold your mouse down over the center part of the clip) and move it until the gap is closed. FrameCycler Professional indicates that it ripples clips by showing a thick red line between the clip you drag forward and the next clip on the timeline.

Stereo 3D Workflow with DualStream NX

DualStream NX

The 5th generation of IRIDAS DualStream support for working with Stereo 3D material includes support for virtually every display technology available today. A list of the most common technologies and the required changes in your FrameCycler Professional setup starts this section about using DualStream.

To take advantage of FrameCycler Professional's capability to automatically load left and right eye footage be sure to adopt one of the file naming conventions listed in the section after the display setup scenario.

Finally the fun part: learn more about the 3D adjustment features in the last section on using DualStream NX.

Stereo 3D Setup Scenarios

FrameCycler Professional can be used on either a single screen with both 3D image and UI on one display, or as a dual monitor setup. A dual monitor setup uses two monitors connected via 2 DVI outputs

The best setup for FrameCycler Professional depends on the display technology for the 3D display.

Basic Setup: Single Screen, UI and S3D Image on one screen

Advanced Setup:
24" or 27" display for UI, 46" S3D display for footage

Selecting the correct output signal on DVI output

The settings for S3D displays can be selected in FrameCycler Professional's Display section. Open the Settings, choose Display, use the second pull-down to turn on the stereo display mode that works with your display tpye. On systems without any specific stereo display technology use red/cyan to see both pictures in standard red/cyan composition.

Line-by-Line Systems

These Stereo 3D Displays are line-by-line systems (also called interlaced scanline stereo). Select "interlaced scanlines" in the stereo display mode selector under Settings/Display to enable Stereo 3D viewing on the JVC, Hyundai and Miracube 46", LG 42" and 55"

2x DVI stereo

A number of stereo display setups require 2 DVI outputs from the workstation. Each output carries one eye only. This applies to:

- Planar stereo screen (with passive glasses, linear polarization)
- Dual Projection (with passive glasses, linear or circular polarization - this setup can also be driven via Dual SDI)
- L/R side by side setups using 2 displays

Basic 2x DVI Setup: NVIDIA OpenGL Stereo
Requirements:
- Windows 7
- NVIDIA Quadro 5000 or 6000
- certified driver for OpenGL Stereo

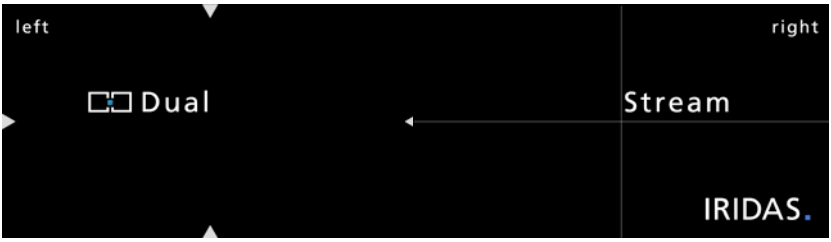
This setup allows you to send left and right image to 2 separate DVI / DP outputs. The user interface will appear on the stereo output on both eyes. To enable OpenGL Stereo acces the NVIDIA control panel, set both displays to NVIDIA clone mode. Then change the following settings under "3D Performance Settings":

- OpenGL Stereo: ON
- Tripple Buffering: ON

Restart the machine after making these changes. Then open the settings in FrameCycler Professional (push "S"), choose Display. Select "Shutter Glasses" from the stereo pull-down menu. Restart the application.

Testing your Stereo Setup

Before you start working on a new project it's recommended to run the test file you'll find in the stereo folder of your FrameCycler Professional installation. This file allows for avoiding inversed stereo settings on your display. To load the files, click the stereo checkbox on the timeline. Then open the desktop, find the folder stereo in your FrameCycler Professional installation. Load either left or right (FrameCycler Professional will automatically load both eyes).
Hit <ALT + D> to put the images in side-by-side view. You should see both images for left and right side-by-side:



Hit <ALT + D> again to turn on the selected stereo mode and turn on your glasses. "left", "Dual" and the 4 arrows should only be visible to your left eye. "right", "Stream", the 4 lines and the IRIDAS logo should only appear on right eye. If this is inversed check the following:

- Active shutter glasses: some emitters have a switch to inverse stereo. Reverse the settings of the emitter.
- Active shutter glasses on Samsung and Mitsubishi displays with TI checkerboard: both the emitter as well as the display itself have switches to inverse stereo. Refer to the user manual, be sure both don't use inversed settings
- Passive systems (such as the JVC, Miracube and Hyundai 46"): These systems don't have a switch to inverse stereo. If the image seems to be inverted, it's easiest to swap eyes in the settings of FrameCycler Professional. Open the settings, choose Display, use the checkbox for "swap eyes".

Organizing Stereo 3D Footage

DualStream applications automatically find the corresponding footage for the other eye (stereo) or other channel (ARRI Mscope) when you drop a sequence into the timeline. In order for this to work, the sequences need to use either one of the following naming conventions in the same position in their fully qualified path:

- "left" and "right"
- "Left" and "Right"
- "LEFT" and "RIGHT"
- "_L" and "_R"
- "lf" and "rt"
- "LF" and "RT"
- "CamA" and "CamB"
- "LinkA" and "LinkB"
- "Link_A" and "Link_B"

The folder naming that includes the Link definition is usually used for Mscope only.

File Path Examples:

Scenario A: both left and right eye are on the same Volume:

- X:\Footage\left\Shot\Version\Test\frame#.dpx
  X:\Footage\right\Shot\Version\Test\frame#.dpx
- X:\Footage\left_eye\Shot\Version\Test\frame#.dpx
  X:\Footage\right_eye\Shot\Version\Test\frame#.dpx
- X:\Footage\left\Shot\Version\Test_L\frame#.dpx
  X:\Footage\right\Shot\Version\Test_R\frame#.dpx
- X:\Footage\left\Shot\Version\Test\left#.dpx
  X:\Footage\right\Shot\Version\right#.dpx

Scenario B: left and right eye are stored on 2 discrete Volumes:

Running OS X please ensure to use Volume Names LEFT and RIGHT. Running Windows please use R:\ and L:\ drive letters.

- L:\Footage\Shot\Version\Test\frame#.dpx
- R:\Footage\Shot\Version\Test\frame#.dpx

Note: Make sure you don't have any of the replacement wildcards as part of your regular filename, otherwise they will be replaced. These examples would not work:

- X:\Footage\left\Shot\Version\Test\Compositing_Shot_left_Lowres.#.dpx
- X:\Footage\right\Shot\Version\Test\Compositing_Shot_right_Lowres.#.dpx

(The _L in the left eye filename's _Lowres would be substituted with _R, and result in right right_Rowres.#.dpx which cannot be found)

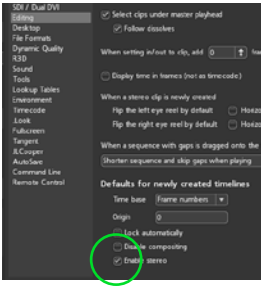
Tip: Customizing the Stereo Naming Convention

DualStream NX allows for changing the preset structure, excluding existing presets or adding new presets according to your pipeline standards.
The preset file is located in the settings folder of your FrameCycler Professional installation. It's called "StereoNaming.fcps", open it with a text editor like wordpad or textedit. Each line in the xml file represents one set of stereo pair naming conventions. Simply add a new line and add a tab between left and right to create an additional preset.

Working with Stereo 3D Footage

To work with a stereo timeline, enable the Stereo checkbox in the timeline.

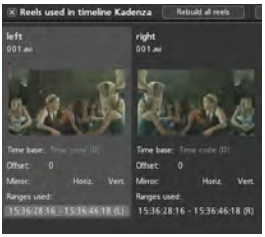
Now use the desktop to add a shot or multiple shots from either left or right eye branch to a new timeline. The corresponding other eye will automatically be loaded.



Note: If you mainly work in stereo, you can change the default for new timelines by checking the "Enable Stereo" checkbox in the Editing settings, then restart the application. Newly created timelines are now stereoscopic by default.

Verifying Stereo Pairs

To verify that both eyes are loaded, open the Reel Browser (CTRL + ALT + R) .
Each shot that you add to the timeline should appear as left and right eye pair.



Opening the Stereo Panel

The Stereo Panel is a unique environment within FrameCycler Professional to modify reel parameters such as mirroring as well as clip based geometry adjustments, 0 parallax control and floating window. To get started be sure a footage clip is marked active on the timeline, then press <K> to open the FrameCycler Professional Panel. Switch to the Stereo Panel by either clicking on the button for Stereo Panel or push < SHIFT + S >.

Stereo Viewing Options

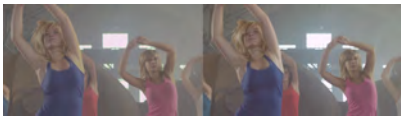
FrameCycler Professional offers a variation of stereo viewing options that can be used to analyze the stereo pairs. All options are visible at the top of the Stereo Panel. The active viewing option is highlighted in blue. You can switch to other options by clicking on its respective button or by using hotkeys.

Stereo View

By default FrameCycler Professional will show the
Stereo View. This will use the stereo display method selected in the settings.
<ALT + S>

Left / Right View

If you want to show either left or right eye, click its respective button. You can use this feature to create a wiggle between left and right eye at any given speed by using the hotkeys:
<ALT + L> for left, <ALT + R> for right.



Side by side

If you want to show both pictures next to each other, use side by side. FrameCycler Professional will automatically scale to fit.
<ALT + D>

Tip: if you prefer **splitscreen** view between left and right, press <F9> to enter splitscreen mode. Press <F9> again to return to side by side.

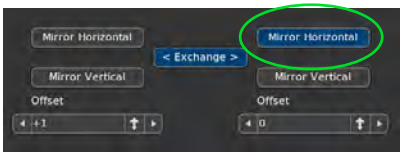
Difference Matte

This view is helpful whenever you want to show / adjust differences in geometry or to identify and adjust 0 parallax.
<SHIFT + ALT>

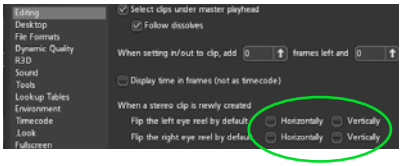
Reel Setup: Mirroring, Swapping, Temporal Adjustments

Mirroring

If the footage is recorded with a mirror rig, invert the horizontal or vertical mirroring with the checkboxes in the Stereo Panel under Reel Setup. All settings are non-destructive and can be altered at any time. There's no background rendering involved.



Tip: If the majority of your clips is flipped/flopped, you can change the defaults before adding them to the timeline. Open the Settings (press <S>), select Editing. Use the checkboxes for vertical or horizontal mirroring. All clips you add to a timeline after changing these presets will be loaded flipped/flopped according to your new settings. You can still make changes in the Stereo Panel after creating a timeline.



Swapping stereo pairs

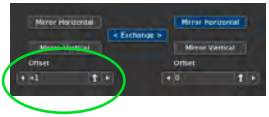
If one of your reels has swapped left and right eye, you can correct for this with the Exchange button.

Note: Make sure your display is set up correctly before swapping stereo pairs. The easiest way to verify this is to load the left/right clip available in stereo subdirectory of your program installation. If left/right are reversed, flip the eyes in the display setup as discussed in the previous chapter.

Adjusting Temporal Offsets

A temporal offset occurs when the recording of the two cameras results in a difference in time code / frame numbering.

It is easiest to make adjustments for temporal offsets while the stereo image is displayed side-by-side. Press <ALT+D> to toggle side-by-side and regular stereo view.



Play the shot you want to adjust. If there's a clapperboard at the beginning or end of the shot, play until you see the clapperboard closed in either left or right eye. If the clapperboard has a digital TC display, simply use a frame while the TC is visible and counting. Use frame step forward and backward (left and right arrow keys) to get this narrowed down. Identify how many frames offset exist between left and right eye. You can interactively change the offset on both eyes by clicking the frame step buttons in the Stereo Panel.

Tip: if there's no clapperboard present, find a frame with action that clearly lasts for one frame only.

Adjusting the Zero Parallax

The Adjust Tab in the Stereo Panel shows one slider only to effectively control the 0 parallax. Values are shown in percentage of resolution as well as pixels.

Rendering

Rendering

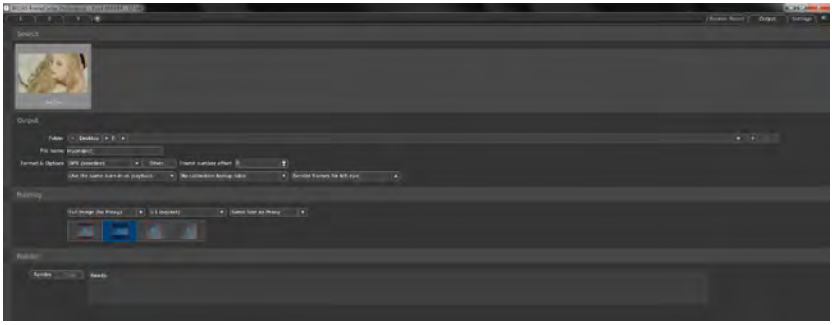
FrameCycler Professional includes an internal render engine which supports various frame sequence formats as well as movie file formats.

1. Select the area of the timeline you want to render

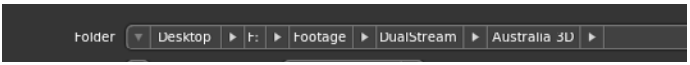
Set an in and out point along the timeline to define the area for rendering.

2. Open the render dialog

(click on the Render button in the user interface or press CTRL + R).



3. Select the output path



4. Select the file output name

If you want to create frame sequence output, padding will be added automatically. It is recommended to use an underscore after the actual frame sequence name. A preview of the resulting output name is displayed in 50% grey next to the field for entering the output name.

5. Select the file output format

FrameCycler Professional comes with output presets for the most popular frame sequence formats and some Quicktime formats FrameCycler Professional interprets internally (see also the chapter on supported file formats for playback and rendering). Select a format from the list or click on "Other" to see a list of available formats and output options.

6. Choose options for burn-in and calibration LUT

By default burn-in will show "use the same as playback", thus making this process wysiwyg. The calibration LUT is set to use no LUT since usually the calibration LUT shouldn't be part of the rendering process. If you require a LUT to be part of the output (e.g. for sending it to devices that can't handle LUTs), select the LUT that should be used for rendering.

7. Select frame number offset

If the output format is a frame sequence type format, you can select an offset for the padding for the sequence. Type the offset in frame numbers.

File Format Support

Universal RAW 5.0 Support

FrameCycler Professional supports the following digital film camera formats:

ARRIRAW Alexa v3 (*.ari*)	Fully certified ARRIRAW color science. Output LUTS for Rec709 EE and P3 incl.
ARRI D21 S.Two RAW (*.dpx*)	The ARRI D21 RAW files recorded on an S.Two Digital Film Recorder (.dpx file extension) are supported. To enable the ARRI .dpx RAW files open the settings dialog, select File Formats and toggle the checkbox for SMPTE DPX / ARRI D21 RAW.
Cineform (*.avi/.mov*)	
DALSA Origin 4K RAW (*.dpx*)	
Ikonoskop A-Cam	Supported via CinemaDNG
Phantom HD/4K (*.cine*)	For older Phantom RAW files with the .cin extension, enable the corresponding flag in the File Formats tab of your user settings.
REDCode RAW (*.R3D*)	FrameCycler Professional supports R3D via the RED SDK. Dynamic Qualities allow for adjusting playback paramaters such as resolution to achieve real time playback.
Silicon Imaging SI 2K/SI Mini (*Cineform RAW .avi/.mov*)	Includes matrix and .Look metadata support.
Silicon Imaging SI 2K/SI Mini (*Uncompressed .siv)*	Includes matrix and .Look metadata support.
Weisscam HS-1 RAW (*.wcr*)	Support for .wcr
Weisscam HS-2 RAW	Support for .wcr and a subset of the DM2 Digimag

ARRI Alexa Support

FrameCycler Professional supports all formats recorded by the ARRI Alexa, including ARRIRAW and ProRes 4444. in 12 bit.

ARRIRAW format acquired with disk recorders writing .ari
ARRIRAW is debayered natively using ARRI's color science. All in-camera settings are applied automatically.

ProRes 4444 recorded with SxS cards
FrameCycler Professional reads ProRes files on both OS X and Windows 7. The files are decoded at original bit depth, maximum quality for all additional processing is ensured. Please be sure to use the latest certified Quicktime for OS X or Windows:
http://doc.iridas.com/index.php/Quicktime_Codecs

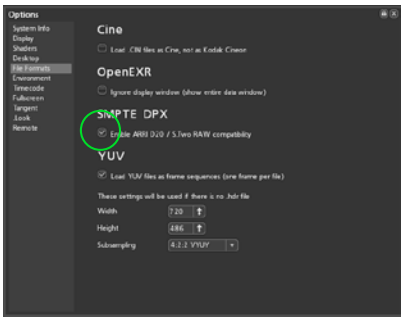
Output Transform LUTs
ARRI provides LUTs for the Alexa in various formats. IRIDAS has tested and certified the set of LUTs designed for use with Shake. You can download the LUTs from ARRI directly.

ARRI D21 Support

FrameCycler Professional supports all formats recorded by the ARRI D21, including ARRIRAW and M-Scope with LinkA and LinkB channel recombination.

RAW format acquired with disk recorders writing .ari
This format can be loaded onto a FrameCycler Professional timeline directly. It is 3K RAW, each frame is 9.1 MB

RAW format acquired as .dpx RAW using S.TWO disk recorders
The RAW files recorded with S.TWO systems are using the DPX container to place RAW data into it. This format is a special use of the .dpx format and requires a change in the FrameCycler Professional settings. Open the Settings Panel, select File Formats, enable the checkbox for D21 DPX support. Note: you can't mix regular RGB DPX files with files recorded as ARRI RAW .dpx



Exposure and Matrix presets for .ari and .dpx RAW
FrameCycler Professional provides presets with Matrix and exposure settings designed by ARRI. These presets are in the default folder for Looks in the subfolder called D21.

ARRI M Scope

This format utilises the 2 SDI outputs of the D21 to record anamorphic HD images. The data captured with tape or disk recorders is not RAW but 2 channels of RGB data, each containing half of the image resolution. FrameCycler Professional can recombine these 2 channels as part of its Dualstream capabilities. Note that bandwidth and other requirements are similar to stereo playback and grading, please read the chapter on working with stereo data for further information on hardware requirements.

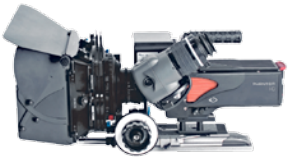
To activate M Scope support in FrameCycler Professional open the settings, apply the following changes:

- Display: use the second pull-down to select M Scope as stereo mode.
- Editing: check the last checkbox on this page to activate stereo timelines as default for newly created timelines.

Delete the current timeline and make sure the stereo checkbox on the timeline is active before adding M Scope data to the timeline.

Phantom HD and Phantom 65 Support

FrameCycler Professional supports all formats by Phantom recorded as .cine. This includes the Phantom HD as well as the Phantom 65.



Phantom .cine RAW

This format can be used directly without loading additional software or adjusting settings parameter. Since it is uncompressed HD or 4K RAW, Phantom RAW real time playback requires a fast disk system.

White balance presets

FrameCycler Professional reads white balance info recorded with all current Phantom cameras (starting with firmware Ph 670).

RED Support (RED ONE / EPIC)

FrameCycler Professional supports files recorded with the RED ONE and RED Epic via the RED SDK. This is available for files recorded with camera software starting with build 16 and will continue to be updated as newer camera software becomes available.

RED ONE RedCode (.R3D)

All formats recorded as RedCode can be used. This includes RedCode 28 and RedCode 36 in windowed (2K, 3K) as well as full sensor recording mode (4K / 4.5K with RED MX).

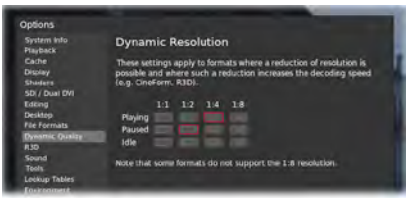
Dynamic Quality Settings

With Dynamic Quality, you can reduce the resolution during playback and load the full frame at pause. This enables a workflow using 4K R3D files where you can access half or quarter resolution proxies for real time playback, but see the full 4K frame during paused image manipulation. Most of the work in color grading and quality control is done while playback is paused, so this is an essential workflow enhancement. As soon as you hit play, the image switches back to the lower proxy resolution, giving you instant moving feedback on your correction.

To access the controls for Dynamic Quality, open the settings panel (click on "settings" or press "S" on your keyboard). Click on "Dynamic Quality" on the settings panel. Then choose the resolution you'd like to use for display when playing in the first row, the resolution on paused playback in the second row. Additionally you can select a third resolution for the idle status of the machine. This will only update the picture to the selected resolution if you are not working with the application and no other processing is done on the workstation.

Working with R3D Settings

You can work with original settings based on each clip's metadata or replace all image adjustments with a global default. Both can be accessed via the settings panel. Open it by clicking on "Settings" or just press "S" on your keyboard. Then select "R3D".



For fast turnaround on dailies or to re-

produce the settings seen while monitoring on set when using in-camera settings, it is recommended to set the application to work with settings stored in each clip. This is the default value.

When switching to manual settings, all files on your current timeline and all files you add to it will use the values you set on this page. This is recommended to achieve best quality and to ease shot matching when in-camera settings differ widely throughout production.

Note: You don't need to reload your timeline after adopting your settings, all the settings can be changed on the fly. You can also safely switch between the manual and the default setup, this won't change your files but only the way the get processed for display. The settings that are active when you commit a render job will define how the images are treated for rendering.

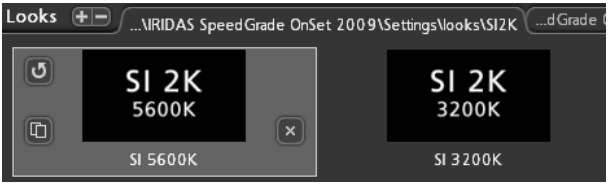
Silicon Imaging SI2K Support

FrameCycler Professional supports several formats recorded by
the SI2K.

Cineform RAW HD/2K
This format can be used directly without loading additional software or adjusting settings parameters. The Cineform NeoPlayer is not required for working with these files in FrameCycler Professional.

SI2K .siv RAW
This new format available with the SI2K records uncompressed RAW files. FrameCycler Professional can directly open .siv files.

White Balance and Matrix presets for SI2K Cineform RAW
FrameCycler Professional provides presets with Matrix and White Balance settings for the Cineform RAW files designed by Silicon Imaging. These presets are in the default folder for Looks in a subfolder called SI2K. They are in .look format, you can apply them via the .Look browser (see the chapter on working with .Looks)



SI2K .siv RAW
This format records uncompressed RAW files. FrameCycler Professional can directly open .siv files. White balance info is applied automatically.
.look files recorded with the camera are interpreted automatically if they are in the same directory as the shot itself.

WEISSCAM Support

FrameCycler Professional supports files recorded with both HS1 and HS2 as .wcr RAW. FrameCycler Professional also supports a subset of the WEISSCAM DM2 Digimag formats in HD resolution.

WEISSCAM Raw(.wcr)

You can work with .wcr files directly, just select them from the desktop and place them on the timeline

WEISSCAM HS2 Digimag HD formats(.fhg*)

The following formats are supported with FrameCycler Professional:

- .fhgWR
- .fhgWD
- .fhgDI
- .fhgWC
- .fhgWE

Recommended Quicktime Formats

FrameCycler Professional can utilise the Quicktime System for Windows 7 and OS X. Please note that there is no Quicktime 64 as of Q3 2011. If you're running Windows x64, you'll need to run a 32 bit version of FrameCycler Professional to be able to utilise the Quicktime System.

Codecs available to the system can usually be put to work with FrameCycler Professional. However, not all codecs are suitable for working real time and may introduce issues such as gamma shifts, therefore FrameCycler Professional supports the following Codecs internally.
These are recommended for both playback and rendering.

- AJA Kona 10-bit Log RGB
- AJA Kona 10-bit RGB
- AJA Kona 10-bit YUV
- AJA Kona 8-bit YUV
- Apple Uncompressed 8-bit RGB
- BlackMagic 10-bit RGB
- BlackMagic 10-bit YUV
- BlackMagic 8-bit YUV

DNxHD and ProRes

To put DNxHD and ProRes to work, you'll need to install the Quicktime codecs provided by Avid and Apple. Please check our online documentation area to get latest recommendations on Quicktime versions and Codec updates:
http://doc.iridas.com/index.php/Quicktime_Codecs

FrameCycler File Format Support

FrameCycler Professional supports the following industry standard file formats.

Format	Read	Write
Cineon (.cin)	Yes	Yes
DPX, DPX 2.0	Yes	Yes
Targa (.tga)	Yes	Yes
TIFF	Yes	Yes
Pixarlog TIFF	Yes	No
Floating Point TIFF	Yes	No
Maya IFF	Yes	Yes
Lightwave IFF	Yes	Yes
Softimage PIC	Yes	Yes
Wavefront RLA	Yes	Yes
Windows Bitmap	Yes	Yes
Gif	Yes	No
Jpeg	Yes	Yes
YUV	Yes	No
OpenEXR	Yes	Yes

Calibration LUT Support

FrameCycler Professional supports the following industry standard file formats for calibrating your display:

Manufacturer	Product	Format	LUT Node Depth
ARRI	ARRI CMS	.cube	various
Filmlight	Truelight	.lut	16x16x16
Kodak	KDM	.3dl	various, only without encryption
Rising Sun Research	Cinespace	.cube	various

To add a calibration LUT to your FrameCycler Professional installation simply copy the LUT to the LUTs folder in your FrameCycler Professional folder on your local hard disk. It will show in the Calibration menu on the timeline after relaunching the application.

If you use a LUT applied in your display hardware, it is not neccessary to apply a LUT within FrameCycler Professional. In case you use multiple displays it is recommended to leave the calibration LUT section blank and use hardware calibration for each display instead. Cascading LUTs is not recommended in order to avoid decreasing bit depth.

Tip: Use LUTs with either 8x8x8 or 16x16x16 nodes
Calibration LUTs usually shouldn't apply radical transformations of your color space, therefore a smaller number of nodes are precise enough for accurate interpolation of the target color space. 16x16x16 is a good compromise between performance and accuracy if you apply it in software. FrameCycler Professional supports up to 256x256x256 nodes, but this would decrease grading performance on the system and wouldn't improve accuracy noticeably.

Related Link with further info on LUT formats:
http://doc.iridas.com/index.php/LUT_Formats

Command Line

The FrameCycler Command Line

FrameCycler supports an extensive command line interface.

Use the command line to launch the application with specified footage loaded, apply playback parameters (such as resampling, playback speed etc.), and queue sequences for dailies. These functions can, of course, all be accessed from the user interface, but the command line offers advantages for some situations:

- For experienced users, it can be quicker than using the GUI to load shots and apply parameters
- Special parameters (such as a custom crop), which are not available from the presets in the dropdown menus, can be set.
- It allows for the use of scripting to integrate in-house workflow tools with FrameCycler.

You can use the IRIDAS Product Launcher tool to apply a command to a running instance of FrameCycler or SpeedGrade.

Accessing the Command Line

Windows XP
Access the command line by clicking on the Start button and then clicking the "Run…" icon. Type cmd into the box, click OK, and the command line prompt appears. Enter the file path for the location of the application (SpeedGrade, FrameCycler or MetaRender) and press enter. You are now ready to use the command line.

Example:

```
C:\>"Program Files\IRIDAS FrameCycler Professional 2007\bin\FrameCycler.exe"
```

Linux
Linux users need to run the terminal (if you are in a graphical environment). At the prompt, navigate to the directory containing your product and you are ready to begin.

Mac OS X
Start up the Terminal in the Utilities folder (inside the Applications folder). Enter the file path for your installation and you are ready to start.

The Anatomy of a Command

The core command line for all IRIDAS products consists of two parts:

[SequenceName] [Range/Offset Options]

For Example

```
FrameCycler C:\footage\frame#.dpx 1-100 –sC:\footage\test.aiff
```

The SequenceName is the fully qualified path to a frame in the sequence – or an abbreviated name such as seq#.tga. The application automatically detects all frames in a sequence and treats it as a whole.

Range refers to the number of frames which will be affected by the command. It is specified as FirstFrame-Lastframe. For example 10-100 will affect the sequence from frame 10 through to frame 100.

Note: If you specify just one number, the application will interpret this as the first frame and the command will affect the rest of the sequence from that point on.

If you specify a range that extends beyond the actual number of frames, or if frames are missing, you will see the "failed to decode frame" image displayed as a placeholder for these frames.

To reverse a clip, simply specify a reverse range:

```
FrameCycler C:\footage\frame#.dpx 100-1
```

An Offset can also be specified using -o followed by a positive or negative number denoting the desired frame offset. The frames will be moved in the time line by the specified offset. Negative offsets cut the specified number of frames from the beginning of the sequence.

Related Links

The Core Command line:
http://doc.iridas.com/index.php/Core_Command_Line

Product Launcher Tool:
http://doc.iridas.com/index.php/Product_Launcher

The FrameCycler Command Line:
http://doc.iridas.com/index.php/FrameCycler_and_SpeedGrade_Command_Line

Customizing

Customizing FrameCycler

Many aspects of FrameCycler Professional can be adapted to fit best into your workflow. This goes for the presets for Aspect Ratio, Crop, Resample and the Burn-in Overlays. The presets that come with FrameCycler Professional are designed to serve a wide range of workflows, so there are usually 2 scenarios where it's useful to apply changes:
1) The presets include more options than you need to be covered, so you drill them down to a much shorter choice of options.
2) Your current project requires a specific option that is not covered by industry standards, so you add a new choice to the template.

All presets are done as simple, human readable text files. It is easy to make changes. Presets are stored in the settings folder of FrameCycler Professional.

Note: you need to restart FrameCycler Professional before any changes will get applied. It is recommended to create backup files of preset files you intend to change.

You can open all preset files with simple text editing applications such as Wordpad (Windows) or Textedit (OS X).

Aspect Ratio: AspectRatio.fcps

What it does: if you are using a special pixel aspect ratio, for example for anamorphic frames, you can choose between two kind of presets in the pixel aspect ratio menu or add additional presets to the menu.

Changing the pixel aspect ratio is done in the display in real-time. Unlike resampling, this command does not require reloading the frames into RAM.

How to change it: to add custom aspect ratios to the menu open AspectRatio.fcps. This is how it looks in Wordpad or Textedit:

```
Anamorphic (stretch 2:1)      2:1
Anamorphic (squash 1:0.5)     1:0.5
```

To add a custom preset simply copy an existing entry and replace the part before the TAB with the display name for the menu you'd like to use, then replace the actual aspect ratio after the TAB with the aspect ratio you'd like to add. If you'd like to add 1.33:1, this would look like this example:

```
AVID 1.33 (1.33:1)  1.33:1
```

After adding a custom preset save and close the file. The new preset will be available next time you launch FrameCycler Professional.

Crop: Crop.fcps

What it does: The Crop Menu allows you to resize your frames by cropping away part of the image. This can be useful for removing black borders or to check how the sequence will appear on different display devices.

After cropping, the image width or height will always be less than (or max. equal to) the actual frame size. FrameCycler Professional will not accept larger values - this would be a job for a Pan & Scan track that also allows for scaling and repositioning.

How to change it: To customize the Crop Menu open Crop.fcps with a Text Editor. Crop.fcps is located in the Settings directory of FrameCycler Professional.

You can simplify the menu by taking out entries that are not relevant to your workflow or current project. A crop preset always includes the actual crop value and any number of Display Names. If one Display Name is sufficient you can make the Display for 2.35:1 much shorter. The Original preset is:

```
2.35 : 1
        CinemaScope 2.35 : 1
        UltraPanavision 2.35 : 1
        Panavision 2.35 : 1
        Technirama 2.35 : 1
        Todd-AO 2.35 : 1
        Super 35 2.35 : 1
```

The shortest version for this preset would be:

```
2.35 : 1
        CinemaScope 2.35 : 1
```

You can also use crop values based on pixel values, Crop.fcps already includes the following:

```
PAL Video W720 H576
NTSC Video W720 H486
720p W1280 H720
1080p W1920 H1080
```

To add an additional pixel value based crop format simply add one line to this list, put a Display Name first, press TAB, then put a value for W and for H.

A third method of defining crop values in Crop.fcps is using values in percentage or absolute pixels. This method allows to define values for left, top, right and bottom individually:

```
10% Border 10% 10% R10% B10%
20% Border 20% 20% R20% B20%
100 Pixel Border 100 100 R100 B100
```

If you'd like to crop 200 pixels from top and bottom, 140 from left and right, add this line to Crop.fcps:

```
200/140 Pixel Border 140 200 R140 B200
```

After adding a custom preset or changing the list of presets save and close the file. The updated list of presets will be available next time you launch FrameCycler Professional.

.

Burn-in Menu: .burnin files

The preset files to create burn-in data are slightly more complex than any of the .fcps files. You can select the kind of data on display as well as its position and size on screen. To allow for simple management of such presets, burn-in presets are stored in a separate folder in the settings directory, each .burnin files shows up as one selection in the Burn-in Menu in FrameCycler Professional.

What it does: You can use Burn-In templates to add text and graphical elements to your frames at load time (and for rendering) . Placeholders are replaced with the current file name, time code etc.

Using the Standard Burn-In

If you choose "Standard" from the list, three elements will be superimposed on the footage displayed in the viewport:

- Current frame number
- Location on disk of current sequence
- Native Time Code of current frame (if this field doesn't exist in the header of the file format you're using there will be no display of Time Code information)

The location of all three elements is always absolute to the actual image size. If you want to be sure you see all burn-in elements, zoom to fit using < Ctrl + Home >

Using the All Fields Burn-In

The "All FIelds" Burn-In will display all data in the header of the file that is on display in the viewport. This view is usually used for quality control purposes but also gives the full represenation of Placeholders that can be used to create a custom Burn-In template.

Creating a Custom Burn-In

The easiest way to generate a customised Burn-In is to open the Standard Burn-In and change it according to your needs. The Standard Burn-In file is located in your FrameCycler Professional folder under settings/burn-in.

Open the file Standard.burnin with a Text Editor. Save the file under a different name inside the same folder and then start to make changes (please refer to the paragpraph below on how to change the file). Next time you launch your IRIDAS application the new template will show in the pull-down for Burn-Ins.

Elements of a .burnin file

If you'd like to use a different frame size as reference for placing the burn-in content you can make changes in the first section of the .burnin file:

```
<width>"2048"</width>
<height>"1556"</height>
```

For using the same file for full HD content please change this section to:

```
<width>"1920"</width>
<height>"1080"</height>
```

The next section includes the actual Parameters shown in the viewport. Every element is called a textnote. In Standard.burnin the first textnote is

```
<textnote>
        <text>"{Src.FrameNo}"</text>
        <textsize>"2"</textsize>
        <textcolor>"255,255,255,255"</textcolor>
        <backgroundcolor>"0,0,0,0"</backgroundcolor>
        <arrow>"0"</arrow>
        <position>"40,40"</position>
</textnote>
```

If you want to change the size you can select from presets 0 (small) to 2 (large) or enter pixel values. A much larger text than preset 2 can be created using the pixel value method, e.g.:

```
<textsize>"60px"</textsize>
```

To change the color from white to black change the text color to (all color values are listed in RGBA)

```
<textcolor>"0,0,0,0"</textcolor>
```

The background color is defined in RGBA as well, this example would give a solid black bar:

```
<backgroundcolor>”0,0,0,255”</backgroundcolor>
```

To change the position of a text note just use x,y values, this example would place the text note above the image:

```
<position>”40,-40”</position>
```

Adding a new Text Note

To add a new text note simply copy an existing text note in the standard.burnin and paste it after the last text note. Change the position next to make sure the new text note is not overlapping with any existing text note. Then replace the Placeholder with the new Placeholder you want to add. The full list of Placeholders for the file format you’d like to use is available in the All Fields view inside FrameCycler Professional, the item in front of the colon can be used as a Placeholder in a text note.

Here’s a list of typical Placeholders that would apply to formats such as DPX, CIN, TGA:

Src.FileFormat
Src.SequenceName
Src.SequencePath
Src.FrameNumber
Timeline.Position
Timeline.FrameRate

If you'd like to add a text note for Playhead Position this could look like this:

```
<textnote>
        <text>"{Timeline.Position}"</text>
        <textsize>"2"</textsize>
        <textcolor>"255,255,255,255"</textcolor>
        <backgroundcolor>"0,0,0,0"</backgroundcolor>
        <arrow>"0"</arrow>
        <position>"40,100"</position>
</textnote>
```

After adding or changing text note elements, save the .burnin file. The new template is ready to use and will show up in the pull-down for Burn-Ins next time you launch FrameCycler Professional.

Hotkey Overview

FrameCycler Professional Hotkeys

Application Hotkeys

Help	< F1 >	Displays hotkey shortcuts and functions
Settings	< S >	Shows or hides the settings window
Desktop	< D >	Shows and Hides the Desktop
Save Timeline	< CTRL+S >	Saves the current timeline and all its components.
Render	< CTRL+R >	Shows or hides the render window
Close	< ALT+F4 >	Closes application
Fullscreen	< ALT+Enter > or < F >	Switches fullscreen mode on or off.
Metadata Display	< M >	Toggles the MetaData display
Toggle Lock Windows	< Scroll Lock >	Locks or unlocks the all windows in the application.
Dual DVI Window	< SHIFT+CTRL+ALT+D >	Toggles the Dual DVI mode

.Look Browser	< P >	Activates the Browser for .Look presets
Reel Browser	< CTRL + ALT + R >	Shows or hides the Reel Browser
Timeline	< Tab >	Shows or hides all timelines.
Hide UI	< SHIFT + H >	SHows or hides all UI elements, centers footage on local viewport

Playback Hotkeys

Play/Pause	<Space>	Starts and stops playback
Reverse Playback	<SHIFT+Space>	Reverses playback direction
Step Back	<Cursor Left>	Steps back a single frame
Step Forward	<Cursor Right>	Advances a single frame

Decrease Playback FPS	<PgDn>	Decreases the frames per second value by 1fps
Increase Playback FPS	<PgUp>	Increases the frames per second value by 1fps
Next Playback FPS Step	<Numpad •>	Doubles frames per second
Prev Playback FPS Step	<Numpad />	Halves frames per second

Playback Mode	<F6>	Switches between single play, loop, and ping-pong playback modes
Toggle AutoMirror	<CTRL+M>	Sequence flipped when the end point reached
Mirror Horizontal	<ALT+M>	Mirror image horizontally
Mirror Vertical	<SHIFT+M>	Mirror image vertically.
Toggle Backward	< , > (Comma)	Toggles backward playback
Toggle Forward	< . > (Period)	Toggles forward playback

Clear memory	< SHIFT+CTRL+F5 >	Unloads all frames
Reload Changed Frames	< F5 >	Reloads all changed frames from disk.
Unload Frames Outside of In/Outs	< SHIFT+F5 >	Unloads all frames that are not in the current in/out area.

Pan and Zoom View Hotkeys

Pan Down	< SHIFT+Cursor Down >	Moves image down in viewing area.
Pan Up	< SHIFT+Cursor Up >	Moves image up in viewing area.
Pan Left	< SHIFT+Cursor Left >	Moves image left in viewing area.
Pan Right	< SHIFT+Cursor Right >	Moves image right in viewing area.
Reset Pan	< SHIFT+Home >	Centers image in the viewing area.
Toggle Match Channel Sizes	< ALT+Home >	Makes all channels the same size while preserving their aspect ratio.
Zoom In	< Numpad + >	Increases the zoom level.
Zoom Out	< Numpad - >	Decreases the zoom level.
Zoom to 100%	< SHIFT CTRL Home >	Adjusts the zoom level to 100%
Zoom to Fit	< CTRL+Home >	Adjusts the zoom level so the entire image fits on screen.
Show all Viewports	< SHIFT+CTRL+ALT+Home >	Ensures that all viewports fit within the current viewing area

Splitscreen View Hotkeys

Change Split	< F9 >	Changes the current split screen mode.
Change Split Orientation	< F10 >	Changes the orientation (vertical/ horizontal) of current split screen mode.
Flip Split Channels	< F11 >	Switches the channel positions in the current split.

Timeline and Navigation Hotkeys

Next Clip	< CTRL+ALT+Cursor Right >	Sets the master playhead to the beginning of the next clip.
Prev Clip	< CTRL+ALT+Cursor Left >	Sets the master playhead to the end of the previous clip.
Select Previous Clip	< SHIFT+CTRL+Cursor Left >	Selects the closest clip to the left of the selected clip.
Select Next Clip	< SHIFT+CTRL+Cursor Right >	Selects the closest clip to the right of the selected clip.

Isolate Current Clip	< CTRL + Spacebar >	Sets in/out points to current clip. Press again to restore previous in/out positions
Isolate Previous Clip	< CTRL + Left >	Sets in/out points to the previous clip
Isolate Next Clip	< CTRL + Right >	Sets in/out points to the next clip

Select Clip Below	< SHIFT+CTRL+Cursor Down >	Selects the closest clip below the selected clip.
Select Clip Above	< SHIFT+CTRL+Cursor Up >	Selects the closest clip above the selected clip.
Center Master Playhead	< CTRL+Numpad 0 >	Moves the master playhead to the center of the timeline.
Move Master Playhead to Selected Clip	< ALT+Numpad 0>	Sets the master playhead position to the start of the selected clip.
Lock Timelines	< SHIFT L >	Locks all timelines.
Unlock Timelines	< SHIFT+U >	Unlocks all timelines.

DualStrem NX Hotkeys

Right Eye	< *left* ALT+R >	Shows right eye only
Left Eye	< *left* ALT+L >	Shows left eye only
Show Stereo	< *left* ALT + S >	Shows stereo pair in selected stereo mode
Side by Side	< *left* ALT+D>	Shows left and right eye side by side on the viewport
Show Difference Matte	< CTRL+ALT+D >	Shows the difference matte of the stereo pair
Switch to Stereo Panel	< SHIFT+S >	Switches from any Grading Panel to the Stereo Panel

In/Out Point Hotkeys

Toggle In-Point	<SHIFT+I>	Sets or resets the inpoint at the current master playhead position.
Toggle Out-Point	<SHIFT+O>	Sets or resets the outpoint at the current master playhead position.
Go to In-Point	<I> or <Home>	Moves the master playhead to the current in-point.
Go to Out-Point	<O> or <End>	Moves the master playhead to the current out-point.
Reset In/Out Points	<SHIFT+CTRL+ALT+O>	Resets the in and out points to default positions.
Unload Frames Outside of In/Outs	< SHIFT+F5 >	Unloads all frames that are not in the current in/out area.

Editorial Hotkeys

Split Clips	< SHIFT+ALT+S >	Splits the currently active clip and all clips directly above it at the master playhead position.
Split Clip	< ALT+S >	Splits the currently active clip at the master playhead position.

Analysis Tools Hotkeys

Toggle Histogram	< H >	Shows or hides the histogram
Toggle Waveform	< W >	Shows or hides the waveform
Toggel Vectorscope	< V >	Shows or hides the vectorscope
Toggle Zoom Overlay	< Z >	Shows or hides the zoom overlay window.
Toggle Zoom Overlay Follow Mouse	< SHIFT+Z >	Switches the follow mode on or off for the zoom overlay window.

Channel View Hotkeys

Lightness Channel	< L >	Shows the HLS lightness (L) channel of the image.
Show Alpha	< A >	Shows the alpha channel of an image.
Show Quick Alpha	< SHIFT+A >	Shows the alpha channel in quick alpha mode.
Show Quick Alpha (inverted)	< CTRL+A >	Shows the alpha channel in inverted quick alpha mode.
Red Channel	< R >	Shows the red channel of the image in grayscale.
Show Green Channel	< G >	Shows the green channel of the image in grayscale.
Show Blue Channel	< B >	Shows the blue channel of the image in grayscale.
Hide Red Channel	< SHIFT+R >	Hides the red channel of the image.
Hide Green Channel	< SHIFT+G >	Hides the green channel of the image.
Hide Blue Channel	< SHIFT + B >	Hides the blue channel of the image.

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Appendix A: Change Log

2011 Release (Build 2011.6689.64)

New Features

Dual DVI support

Stereo Panel with 0 Parallax Control

Head-Up Display for Stereo 3D data

Fully compliant real time ARRI ALEXA ARRIRAW 3.0 color science support

New: Support for RED EPIC files

Universal RAW 5 algorithm siginificantly enhances RAW Bayer Interpolation

Crop/Resample/Aspect Ratio preview

Output framing controls for letterboxed etc. rendering

Automatic detection of RED stereo reels

Manual assignment of stereo reels

ReviewLink now searches for left/right naming conventions in stereo setups

CTRL + SHIFT + ENTER invokes the ReviewLink commit function

Stereo mode changes are now communicated via ReviewLink

Framing interace for rendering completely redesigned

On/Off switches for Crop, Resample, Aspect, Burn-in and Overlay dropdowns for faster toggling.

Changes

Disabled AutoComplete for UNC paths as they may take a long time to compute, blocking the input.

Enabled timecode reading from additional DPX subvariants

Updated CinemaDNG timecode support to the current and final spec

Default Dynamic Quality setting is now 16f/8

M hotkey will now invoke the metadata control. ALT M will mirror (mirror was too easily invoked in many scenarios).

When the timeline is empty, clicking the stereo check box will change the default mode for timelines

When detaching the scopes, the desktop will be hidden; when desktop is shown, the scopes will be hidden

Added new standard render sizes

Support for vertically flipped .cine files.

Bugfixes

Crash when hovering over reel browser in some scenarios

Application stopped responding when path was set to “Home” in pop up browsers

Under rare circumstances the frame loader loaded the wrong frame when pausing, resulting in a momentary change in image after paused.

Stereo metadata is now read from both eyes

Base path for sequences created from sub trees were invalid

Disabled AVX CPU instruction support on operating systems that do not enable it

Crash when deleting a timeline while the mouse was still hovering over a specific part of the reels browser